

CLAIMS

1. A method for screening an indicator substance passively produced by an action induced by a trigger protein, comprising the following steps:

1) contacting the trigger protein prepared by a cell-free protein synthesizing means with a target cell extract which contains the indicator substance that is passively produced by an action induced by the trigger protein and desired to screen, to initiate the action by the trigger protein, and 2) specifying the substance changed by the action induced by the trigger protein.

2. The screening method according to claim 1, wherein the cell-free protein synthesizing means uses a wheat embryo extract which is substantially removed from a contaminating endosperm component and a low molecular protein synthesis inhibitory substance.

3. The screening method according to claim 2, wherein the unpurified or partially purified trigger protein prepared by the cell-free protein synthesizing means initiates the action on an unspecified indicator substance.

4. The screening method according to any one of claims 1 to 3, wherein as a marker for identifying an indicator substance changed by an action induced by a trigger protein, a particular substance capable of labeling the indicator substance of interest is introduced into the system.

5. The screening method according to claim 4, wherein

the indicator substance changed by an action induced by a trigger protein is labeled with a means selected from the followings:

- 1) radioactive substance,
- 2) fluorescent substance,
- 3) stable isotope, and
- 4) antibody.

6. The screening method according to any one of claims 1 to 3, wherein the indicator substance changed by the action induced by the trigger protein is detected using a change in molecular weight as a marker.

7. The screening method according to any one of claims 1 to 6, wherein the trigger protein is selected from the followings:

- 1) enzyme,
- 2) transcription factor,
- 3) intranuclear receptor, and
- 4) cell membrane receptor.

8. The screening method according to any one of claims 1 to 7, wherein the target cell extract is selected from the followings:

- 1) normal cell-derived extract,
- 2) cancer cell-derived extract,
- 3) wheat embryo extract, and
- 4) cell-derived extract subjected to stress and/or chemical treatment.

9. A reagent kit for screening, comprising at least one reagent used in the screening method according to any one of claims 1 to 8.

10. A novel indicator substance which is passively produced by an action induced by a trigger protein identified by the screening method according to any one of claims 1 to 8.

11. A method for screening a substance affecting the action of a trigger protein on a target cell extract, comprising: using the indicator substance specified in claim 10 as a control, contacting the trigger protein with the target cell extract in the presence or absence of the candidate substance, and comparing changes in the specified indicator substance.